

“Process for the hydrothermal treatment of asbestos and/or asbestos-containing materials in supercritical water and relative production plant.”

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ABSTRACT

5 Herein described is a process for the hydrothermal treatment of
asbestos and/or materials containing asbestos in supercritical water
(Supercritical Water, SCW), that provides for the withdrawal (3) of water
from a tank (2), the transformation (5) of the water in supercritical water, the
reaction of the supercritical water with asbestos or with material containing
10 asbestos in a suitable environment (8) by means of a hydrolysis process, the
cooling (14) of the waste water, the filtering (15) of the waste water, the
collection of the waste water in a tank (17). Herein is also described a plant
for the treatment of asbestos and/or materials containing asbestos
comprising a water tank (2), a withdrawal pump (3) associated to said tank
15 (2), a furnace (4) containing a serpentine coil (5) fed by said withdrawal
pump (3) for the transformation of the water in supercritical water and a
reactor (8) for the reaction of the supercritical water with asbestos and/or
with the material containing asbestos, heat exchange means (14) for cooling
the waste water from said furnace (4), and filtering means (15) of the water
20 positioned at the output of said exchange means (14) and collection means
(17) of the cooled and filtered waste water. (Fig.1).